# Regulation and Competitiveness of U.S. Businesses

## Is It Time for a Competitive Impact Statement?

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## 1. Introduction

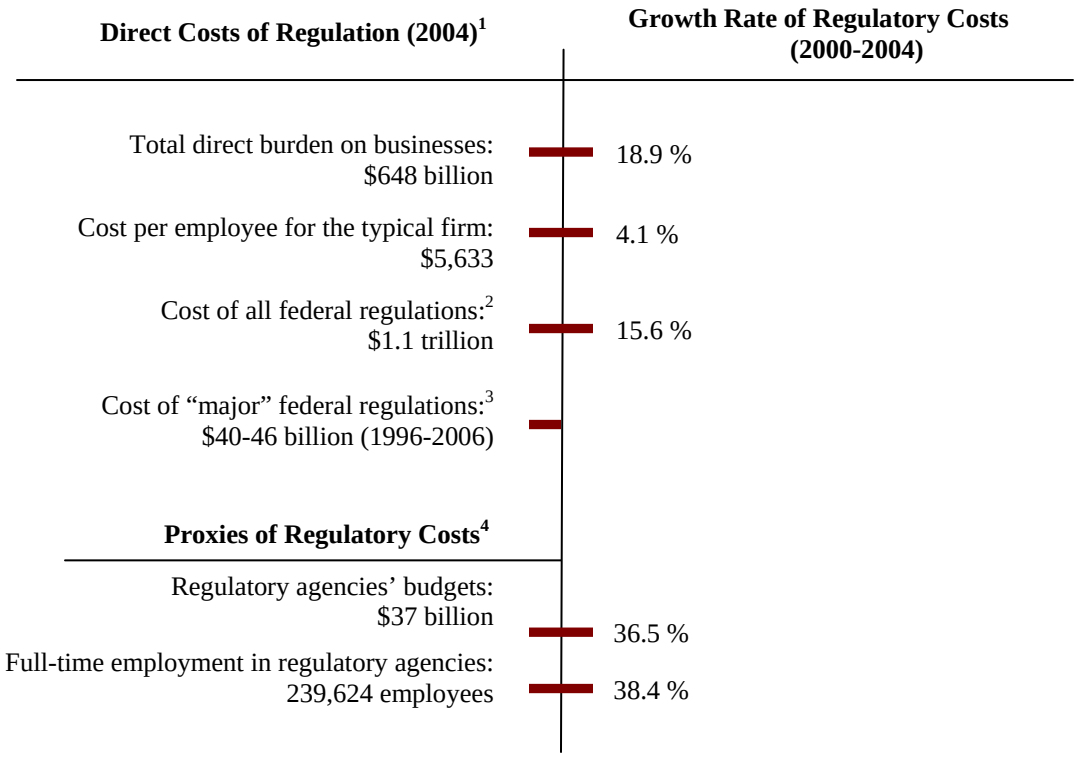
**W**hat is the cost of complying with federal regulations for U.S. businesses? Figure 1 shows that in 2004, U.S. federal government regulation cost businesses in the United States an estimated $648 billion.[1] This cost burden has increased about 19 percent in inflation-adjusted dollars relative to the $545 billion estimate for 2000. The regulation cost per employee reached $5,633 per year in 2004. A less precise tally of trends in regulatory burdens is provided by regulatory agencies' budgets and numbers of employees. Spending by federal regulatory agencies on regulatory activity reached $37 billion in fiscal year 2004. This cost has grown 36 percent in inflation-adjusted dollars relative to $27 billion in 2000. Total staffing in federal regulatory agencies in fiscal year 2004 equaled 239,624 full-time equivalent employees. This staffing level grew by 38 percent between 2000 and 2004. In contrast, total estimated benefits ranged from $99

*Acknowledgements—This report is based on research conducted by Echeverri-Carroll, Research Scientist and Director of Economic Development at the IC$^2$ Institute, The University of Texas at Austin, and Ayala, a research associate at the IC$^2$ Institute and a Ph.D. student at UT's LBJ School of Public Affairs. The authors wish to thank professors Robert A. Peterson, Robert H. Wilson, J. Bruce Kellison, James B. Steinberg, David B. Spence, Thomas O. McGarity, and Frank B. Cross for providing important comments and suggestions. They also appreciate the financial support of Temple-Inland and the LBJ Foundation. Opinions, findings, and conclusions or recommendations are those of the authors and do not necessarily reflect the views of any of these Institutions.

[1] Sources for data in this paragraph are provided at the bottom of Figure 1.

billion to $484 billion from 1996 to 2006.[2] Although federal regulations bring many benefits to society, every indicator shows that the cost for businesses of complying with these regulations is sizable and has been growing rapidly.

## Figure 1—Cost of complying with federal regulation for U.S. businesses (2000-2004)




[1] Source: Crain, Mark W. 2005. The impact of regulatory costs on small firms (SBA contract SBAHQ 03-M-0522). *Small Business Research Summary* No. 264. Washington DC: Office of Advocacy, Small Business Administration. Available at: http://www.sba.gov/advo/research/rs264tot.pdf.

[2] Costs of all federal regulations to individuals, firms, and state and local governments (excludes regulatory agency spending).

[3] "Major" regulations are those with over $100 million annual impact. Source: Office of Management and Budget. March 2007. *Draft report to Congress on the costs and benefits of federal regulations*. OIRA Reports to Congress. Office of Information and Regulatory Affairs, OMB. Available at: http://www.whitehouse.gov/omb/inforeg/2007_cb/2007_draft_cb_report.pdf.

[4] Source: Dudley, Susan E., and Melinda Warren. 2004. *Regulators' budget continues to rise: An analysis of the U.S. budget for fiscal years 2004 and 2005*. Regulatory Report 26, Joint report: Mercatus Center, George Mason University (Arlington, VA) and Weidenbaum Center, Washington University (St. Louis, MO).

[2] Office of Management and Budget. March 2007. *Draft report to Congress on the costs and benefits of federal regulations*. OIRA Reports to Congress. Office of Information and Regulatory Affairs, OMB. Available at: http://www.whitehouse.gov/omb/inforeg/2007_cb/2007_draft_cb_report.pdf.

More than two decades ago, the increasing burden of federal regulation led President Reagan to make regulatory relief one of his four pillars of economic growth. He specifically used the term regulatory *relief* rather than regulatory *reform* to emphasize his desire to cut back regulations, not just make them more effective. In line with this idea, Reagan created the Competitiveness Policy Council (CPC) in 1988. The CPC advised the President and Congress on policies to promote U.S. competitiveness. The CPC recommended a federal law calling for the executive branch to attach a Competitiveness Impact Statement (CIS) to any new legislative proposal to Congress that might affect U.S. competitiveness. A CIS would require all U.S. federal government agencies to produce a document that describes how proposed major federal laws significantly affect the competitiveness of companies operating in the United States. In its first report to Congress, the CPC (1992: 40) specifically states:

> It is clear that our political institutions should take account of the implications for the country's competitiveness of all new programs that they adopt. The Congress already reached such a judgment in 1988 when, in the Omnibus Trade and Competitiveness Act, it mandated the preparation of Competitive Impact Statements for precisely that purpose. The law has seemingly been ignored and such Statements, however, have played no role in the national debate on critical issues including the budget, tax policy, education, and health care reform. The requirement was mandated for a trial six-year period, of which over half has already elapsed. We therefore believe that the Administration should prominently include a Competitiveness Impact Statement with each recommendation or report on legislation that it submits to the Congress.

The CPC ceased operation in 1997 when Congress stopped funding it, and the recommendation for CISs was never approved. However, the main issue addressed in the present report is: whether the concept of a CIS should be revisited. In addressing this issue, we divide the remainder of the report as follows. Section 2, a review of the literature on the effect of government regulations on U.S. businesses, concludes that the lack of reliable data at the industry level leads to contradictory results. Section 3 explains that the lack of data at the industry level is the result of a U.S. regulatory analysis that has focused on measuring the efficiency (net cost to society) of regulation, not on its distributional effects among groups in society (including U.S. industries). Section 4

reports that although there exists a similar lack of data at the industry level in the European Union (EU), the EU business community has been successful in developing "business-friendly" regulations by conducting their own surveys on the effects of key regulations on businesses. Section 5 presents some conclusions on the idea of revisiting a CIS.

## 2. Has the Cost of Regulation Affected U.S. Industrial Competitiveness?

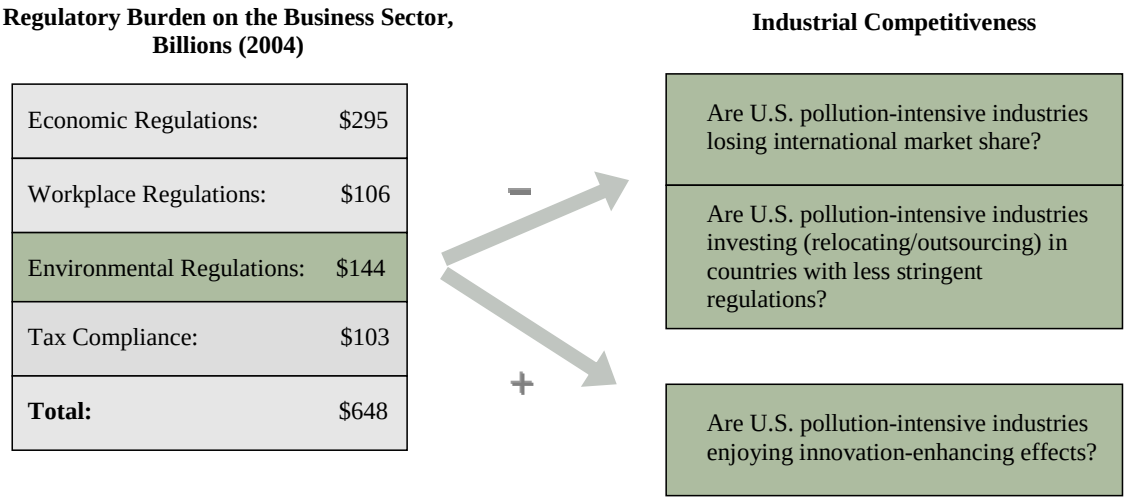
Figure 2 presents estimates of the costs to business of federal regulations by type: economic, workplace, environmental, and tax compliance. Economic regulations—those that refer to government-imposed restrictions on firms' decisions regarding price, quantity, entry, and exit—cost businesses $295 billion in 2004. This category also includes international trade and investment regulations that impose restrictions on foreign imports (e.g., quotas and tariffs), increasing the cost of doing business. Social regulations cost businesses $250 billion in 2004. These regulations are those that protect the public interest in the workplace (wages, benefits, safety, and health) and in the environment (e.g., water and air pollution). Finally, there is a substantial burden on U.S. businesses of paperwork costs associated with the time and resources required for recordkeeping, reporting, and compliance with laws and regulations.[3] The time required to comply with the federal tax code accounts for a large part of this burden ($103 billion in 2004).[4]

Understanding the effects of regulation on the competitiveness of businesses requires data on the costs of each type of regulation at the industry level. The level of aggregation (country, industry, or firm) used in the analysis plays a key role in our understanding of the relationship between regulation and competitiveness. In particular, the literature shows that macro (country-level) studies have failed to arrive at clear conclusions

[3] The term *paperwork burden or cost* is used as a metaphor since electronic submissions are replacing paper.
[4] The cost estimates for the other regulations already account for most of the non-tax-related compliance and reporting paperwork burden associated with these regulations.

concerning the impact of environmental regulations on competitiveness, technological change, and industrial location (Grether and de Melo 2003). Barton et al. (2007) explain that firm-level case studies are also unlikely to produce conclusive evidence on either the negative impact or the advantages of environmental regulation. This is so because the response of firms to environmental regulation is critically dependent on the competitive characteristics of the industry in which they operate. Moreover, firm-level studies run the risk of being considered anecdotal instead of serious scholarly work. Sectoral industry studies, however, offer specific insights without overlooking firm dynamics (an element missing in aggregate macro studies) and facilitate looking at firms' strategies at various stages in the value-added chain. In this regard, a key issue is: what kind of regulatory compliance costs data are available at the industry level?

## Figure 2—Regulatory costs and industrial competitiveness




Source of estimates: Crain, Mark W. 2005. The impact of regulatory costs on small firms (SBA contract SBAHQ 03-M-0522). *Small Business Research Summary* No. 264. Washington DC: Office of Advocacy, Small Business Administration. Available at: http://www.sba.gov/advo/research/rs264tot.pdf.

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A complete analysis requires data on the cost of complying with economic and social (workplace and environmental) regulations at the industry level. Unfortunately, the only

data available by industry are the costs of complying with environmental regulations, and those data are rather old. Pollution Abatement Costs and Expenditures (PACE) are available for a large number of industries (up to six-digit NAICS)[5] from the Bureau of the Census from 1973 to 1994 (except for 1987) and for 1999, when the survey was funded by the Environmental Protection Agency (EPA). Most of the studies reviewed here use these outdated data.

Following is a review of the literature on the relationship between federal regulation and the *international* competitiveness of U.S. businesses. The international benchmark refers to the success with which an industry (firm, individual plant, or country) competes against overseas counterparts, and it is often measured in the literature in terms of international trade, investment flows, or the effect on innovations.[6] Indeed, as depicted in Figure 2, the studies reviewed focus on answering any of three questions. Two of these questions refer to the negative effect on trade or investment of increasing costs associated with more regulation: Are U.S. pollution-intensive industries losing international market share? Are they investing in countries with less stringent regulations? The third question refers to the potential benefits associated with increasing regulation: Are U.S. pollution-intensive industries enjoying innovation advantages resulting from more stringent regulations?

The issue of whether pollution abatement costs hinder the international competitiveness of U.S. firms has stimulated a heated debate in the United States (Stewart 1993). There is considerable disagreement over the extent to which increasing environmental costs have caused pollution-intensive firms in the United States to sell less in the international market (lose market share) or to relocate to pollution havens (outsource). There is also considerable disagreement over the extent to which stricter environmental regulations have stimulated innovations in U.S. businesses.

[5] The North American Industrial Classification System (NAICS) classifies establishments by the type of activity in which they are primarily engaged. NAICS industries are identified by a 6-digit code.

[6] A change in competitiveness in the context of the studies reviewed here is understood as a change in exports and imports (trade) or location decision of industries and firms (investment) affected by larger regulatory costs. However, international competitiveness can be also associated with broader characteristics that are harder to quantify such as the collection of factors, policies, and institutions that determine the level of industrial competitiveness.

The studies analyze either the costs associated with environmental regulation or their positive effects on innovation, but rarely both (the net effect). The conventional view associates regulation with negative effects for pollution-intensive industries, maintaining that regulations translate to increasing costs for such industries, putting them at a competitive disadvantage. This view argues that these industries will lose market share or will relocate to countries with less stringent environmental regulations. In contrast, the revisionist view makes a case for the positive aspects of regulations on these industries, especially the beneficial effects on innovation and export opportunities in the market for green technologies.

### *The Negative Effects of Regulation on Business Costs*

After reviewing literature that focuses on the negative effects of regulation on businesses (the conventional view), Jaffe et al. (1995) conclude that there is "a very mixed picture" on the relationship between environmental regulation and competitiveness. Most of the studies, however, report that differences in environmental compliance costs rarely have a serious effect on industrial competitiveness (OECD 1991; Leonard 1988; Kalt 1988; GATT 1992; Blazejczak 1993). Indeed, some of these studies note that this is not surprising considering that spending on pollution control amounted to less than 2 percent of value added for 86 percent of U.S. industries in 1989 (Census 1991), meaning that labor costs and other variables outweigh environmental compliance expenses in importance.

Other empirical studies show also little propensity for pollution-intensive industries to move to pollution havens (Low and Yeats 1992; Kalt 1988; Tobey 1990; GAO 1990). This is because even in industries with high pollution-control costs, companies often face other deterrents to relocation, including fixed capital costs and sensitivity to transportation expenses (Grossman and Krueger 1993). Thus, instead of relocating to less-developed countries (nominally, the South), companies implement strategies that allow them to continue producing in countries with stringent regulations. One of the best

illustrations of the environmental strategies that firms in industrialized countries follow when confronting stricter regulations is in the Barton et al. (2007) case studies of three pollution-intensive industries—iron and steel, leather tanning, and fertilizers—in a multi-country setting.

Barton et al. (2007) notice that there have been significant changes in the location of production for the aforementioned industries and, in particular, an increase in the share accounted for by developing countries. Indeed, they note that the share of the world iron and steel production located in developing countries has more than doubled since the late 1970s. In the tanning industry, the share of global production located in the South increased from 26 percent for heavy leather and 35 percent for light leather in 1969-1971 to 56 percent for both types of leather by the mid-1990s. Also, fertilizer production in developing countries has more than doubled its share of global production since the end of the 1970s.

In spite of developing countries' increased market share in these industries, Barton et al. (2007) observe that case studies of these three industries show no evidence of industrial flight from the more-developed countries (nominally, the North) to the South in order to take advantage of less stringent regulations in the latter. So if firms in these industries have not relocated, what strategies have they used to maintain their competitive position in the face of more stringent environmental regulations and intensified international competition? One strategy has been to concentrate on the less price-sensitive segments of the market, usually by moving toward the production of high-quality products or those that incorporate more value added. As Barton et al. (2007) note, by emphasizing quality, these firms insulate themselves against competition from lower-cost overseas sources. A parallel strategy has been to outsource the most polluting stages of the production process. An example of this is the tendency of the tanning industry to import hides after the intermediate wet blue stage because that is the most pollution-intensive part of the production process (Barton et al. 2007).

Barton et al. (2007) point out that although some of these firms have made investments in developing countries, there is no evidence that these investments have been motivated by a desire to take advantage of less stringent environmental regulations in the host country. On the contrary, the main incentives have been a desire to participate in rapidly growing markets or to gain access to raw materials. Demand has played a significant part in the changing patterns of industry location in all three pollution-intensive industries. Indeed, evidence shows that the share of world consumption in the South has increased significantly in all three cases. Furthermore, Porter (1991) notes that these studies (on the negative effects of regulation on competitiveness) are biased because net compliance costs are overestimated by assuming away innovation benefits. He maintains that environmental regulations not only increase business costs but can also improve the innovation capacity of the affected businesses.

### *The Positive Effects of Regulation on Innovations*

The revisionist view focuses on the positive effects of regulation on businesses. Porter (1991) first proposes this hypothesis, so it is often referred as the Porter Hypothesis. He believes that properly designed environmental standards can prompt innovation that may partially or more than fully offset the cost of complying with them. Such innovation offsets can not only lower the net cost of meeting environmental regulations, but can even lead to absolute advantages over firms in foreign countries that are not subject to similar regulations. By stimulating innovation, strict environmental regulations can actually enhance competitiveness. This view rests on the opportunity costs for companies of not controlling for pollution, not on mitigating pollution's social costs. The focus is on the opportunities forgone, such as a new market for green products, when companies do not implement environmental control strategies.

Porter and van der Linde (1995) explain that innovation in response to environmental regulation can take two forms. Innovation can address environmental impact without improving the affected product or the related processes. Such innovation simply reduces the cost of complying with pollution control regulations but does not change the relative

competitiveness of the firm that developed the innovation. The second form of innovation addresses environmental impacts while simultaneously improving the affected product itself or related processes. In some cases, the benefits of these innovation offsets can exceed the costs of compliance; this kind of innovation is central to the Porter and van der Linde (1995)'s claim that environmental regulation can actually increase industrial competitiveness.

Case studies are the only vehicle currently available to provide evidence that complying with environmental regulation often improves product performance or quality. Porter and van der Linde (1995) cite companies like Raytheon and Hitachi as examples of "product offsets." To eliminate ozone-depleting chlorofluorocarbons in the soldering process in order to comply with the U.S. Clean Air Act, scientists at Raytheon adopted a new semi-aqueous, terpene-based cleaning agent that could be reused in the cleaning of electronic circuit boards. The result was not only compliance but also higher product quality and lower operating costs. In a similar vein, scientists at Hitachi responded to a 1991 Japanese recycling law by redesigning products to reduce disassembly time. In the process, they reduced the number of parts in a washing machine by 16 percent and the number of parts in a vacuum cleaner by 30 percent, showing how environmental regulations can induce companies to redesign products for better recyclability.

Porter and van der Linde (1995) observe that "process offsets" are also important. For instance, Ciba-Geigy, in order to reduce its wastewater streams, switched to a different chemical conversion agent that did not result in the formation of solid iron sludge; the company also modified a process to eliminate the release of potentially toxic products into wastewater. These changes not only boosted yield by 40 percent but also eliminated waste, resulting in annual cost savings of $740,000.

In the revisionist view, environmental regulations are seen not only as benign in their impacts on international competitiveness but as a net positive force driving innovation in U.S. firms, thereby making them more competitive in international markets (Porter 1991; Porter and van der Linde 1995). Thus, one of the most important results of product and

process offsets is that they can help companies gain international market share. Porter and van der Linde (1995) give the following example. Germany enacted recycling standards earlier than most other countries, giving German firms an early-mover advantage in developing less packaging-intensive products, which have been well received in the marketplace. When a company gains a competitive edge, especially because its home market is sophisticated and demanding in a way that compels further innovation, its economic gains can be lasting.

The relationship between environmental regulation and innovation proposed in the Porter Hypothesis is difficult to investigate systematically due to inadequacies in available data (Esty 1994; Jaffe and Palmer 1996; Oates et al. 1993). The review by Jaffe et al. (1995) of the literature on technological change and the environment concludes that there is considerable disagreement over the extent to which innovation offsets exist in practice. When they do exist, there is also controversy over whether they are sufficiently large, relative to research and development (R&D) and management costs, to give rise to true win-win situations.

Again, the multi-country sectoral study by Barton et al. (2007) of three pollution-intensive industries finds that firms adopt new, less polluting process technologies because they seek economic efficiency, not because they are compelled by environmental regulation. They conclude that none of these industries provides a significant example of innovation offsets to suggest that environmental regulation leads to increased competitiveness. They discuss how two major technological changes in the steel industry (electric arc furnaces and continuous casting) have had significant environmental implications in recent years, but although these processes have reduced environmental damage, they were not a response to environmental regulation. The environmental benefits have been incidental to the economic advantages that have motivated the introduction of these technologies. Thus, the authors conclude, it is not surprising that steel companies tend to regard environmental improvements as involving additional costs instead of perceiving them in win-win terms.

Little is known about the effects of economic or social regulations on the competitiveness of U.S. industries because data on the cost of complying with these regulations at the industry level are simply not available. The only data available at the industry level are on the cost of complying with environmental regulations, and the data are somewhat old. Moreover, most empirical studies that use these data are biased because they do not account for the possible positive effects on innovation associated with environmental regulations. The available evidence on the effects of regulations on innovations (Porter Hypothesis) is rather anecdotal because hard data are not available. Why does the U.S. government not collect data that will allow a better understanding of the effect of regulations on the competitiveness of U.S. businesses? As shown in the next section, the focus of the U.S. regulatory analysis process has been on improving how to measure the efficiency of regulations—the costs and benefits of new regulations for society. The distributional effects of new regulations—how their costs and benefits are divided among different groups in society—including businesses, local and state governments, and consumers—has not been its priority.

## 3. The U.S. Regulatory Analysis Process

During the Nixon administration (1969-74), new regulatory agencies in charge of social regulation—health, environment, and safety—were created.[7] However, the emergence of new regulatory agencies was not accompanied by an effort to better measure the costs and benefits to society of the new regulations from these agencies. Indeed, Viscusi et al. (2005) note that when the new regulatory agencies were created, there was no executive branch oversight, so routine regulatory actions seldom received Congressional scrutiny. According to these authors, it was not until the 1980s that it became apparent that some oversight mechanism was needed to ensure that these regulations were in society's best interest, and that the costs and benefits of major new regulations needed to be estimated.

[7] The two most important agencies, the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA), were created in 1970.

The earlier analysis of the impact of regulation on society was dominated by techno-bureaucratic thinking, meaning that regulators made little use of the tools from neoclassical economics. McGarity (1991: 7), who introduces the term *techno-bureaucratic thinking*, describes it thusly:

> The solution to regulatory problems under the traditional model depends heavily upon professional judgment. Because the existing data rarely compel a particular result, a lot of techno-bureaucratic thinking is really grounded in a kind of intuition that is informed by technical training and experience. The technical experts do not analyze the problem and derive a solution so much as they "feel" their way through to an answer, accommodating as many affected interests as possible along the way to reduce the external resistance to their ultimate resolution of the problem…It is a matter of secondary importance that the benefits of the rule can somehow be shown to exceed its costs.

The informality that permeated the regulatory system created general dissatisfaction with the regulatory process among those being regulated. In 1974, to introduce some presidential control over regulatory policy, President Ford (1974-77) issued Executive Order 11281, which mandated that an Inflation Impact Statement accompany all major proposals for legislation, rules, and regulations. Responsibility for implementing the new program was delegated to a new agency, the Council on Wage and Price Stability (CWPS) within the Office of Management and Budget (OMB). The analysts at CWPS quickly concluded that a regulation would not be truly inflationary unless its costs to society exceeded the benefits it produced. Moreover, they defended the idea that the inflationary impact of a proposed rule could best be ascertained by quantitatively comparing the costs and benefits of the proposed rule to the costs and benefits of its alternative (McGarity 1991).

During the Ford and the Carter (1977-81) administrations, regulatory analysis focused on improving the tools with which the effectiveness of a regulation was evaluated. McGarity (1991) describes this process as one of change from techno-bureaucratic thinking to comprehensive analytical rationality, which depends heavily on the paradigms of neoclassical microeconomics. In this latter model, the analyst would need to evaluate the

aggregate costs and benefits to society of a new regulation but not necessarily its effects on different groups, including businesses, within society.

President Reagan (1981-89) believed that regulations and excessive paperwork placed businesses at a disadvantage in an increasingly competitive world marketplace. He supported continued deregulation and other reforms to eliminate regulatory obstacles to open competition. Shortly after taking office, Reagan abolished the CWPS and shifted its regulatory review staff to a new Office of Information and Regulatory Affairs (OIRA) within the OMB. This group was put in charge of estimating the aggregate social costs and benefits of new regulations. OIRA would evaluate new regulations based on two questions: Are the benefits of the proposed regulation larger than its costs? Is the proposed action the best one among alternatives? A new, considerably larger group was also created within OIRA to analyze the fiscal impact of paperwork and other costs on regulated industries. According to Viscusi (1983), the asymmetry in the size of the staffs of these two groups suggests that the question of industry burden received the majority of the administration's attention.

Under President G.H.W. Bush (1989-93), regulatory oversight procedures remained virtually unchanged. Later, President Clinton (1993-2001) introduced Executive Order 12866, which limited OIRA's reviews to "significant regulations"—those with a likely substantial effect on the economy, the environment, or public health and safety, or those raising novel policy issues (Katzen et al. 2007). This executive order emphasized that many consequences of policies are difficult to quantify and that qualitative concerns should be taken into account as well. It introduced only a slight modification to Reagan's order by streamlining (so that the OMB reviewed only 500 regulations per year instead of 2,200) and by increasing the public consultation and transparency requirements (Morrall 2001).

On January 18, 2007, President G.W. Bush issued two documents. The first is Executive Order 13422, which amended Executive Order 12866 and requires that each federal agency have a regulatory policy office run by a political appointee to supervise the

development of rules and documents providing guidance to regulated industries. Despite White House comments that the executive order was not meant to rein in any one agency, business executives and consumer advocates believe that the administration was particularly concerned about rules and guidelines issued by the EPA and OSHA (Pear 2007). Business groups welcomed the executive order; however, consumers as well as labor and environmental groups surmise that it gives too much control to the White House (Pear 2007). The other document, OMB's final bulletin on *Agency Good Guidance Practices*, extends OIRA review to include significant guidance documents. Federal agencies are increasingly using guidance documents to inform the public and to provide direction to their staff regarding agency policy on the interpretation or enforcement of their regulations. According to Hahn and Litan (2007), no one knows the real impact of guidance documents, but it could be substantial.

The previous review shows that the U.S. regulatory program has become more sophisticated over time. U.S. regulatory agencies now use tools from neoclassical economics to measure the costs and benefits of new regulations to society. This is a step forward from the techno-bureaucratic thinking that dominated earlier regulatory analysis; however, as we discuss in the following paragraphs, the question remains of how successful regulatory agencies are in measuring the costs and benefits of new regulations.

President Reagan issued Executive Order 12291 in 1981. It required agencies to issue regulations whose benefits outweighed their costs and to send them to the OMB for review and analysis before they could be published in the Federal Register as proposals or as final regulations with the effect of law. This executive order also required that major regulations (over $100 million annual impact) had to be accompanied by a Regulatory Impact Analysis (RIA).

Hahn and Dudley (2007) study how well the U.S. government conducts cost-benefit analyses after more than 25 years of preparing RIAs. They assess a sample of 75 cost-benefit analyses of federal environmental regulations from the EPA that spanned the Reagan, G.H.W. Bush, and Clinton administrations. They find that a significant

percentage of the analyses done by the EPA did not report some very basic economic information and that there was a great deal of variation in the quality of the cost-benefit analyses. They point out that while 100 percent of the RIAs monetized at least some costs, only 50 percent monetized at least some benefits. This suggests that comparisons of costs and benefits were not occurring in a large number of cases for which the necessary data were actually available.

Hahn and Tetlock (2007) concludes that we do not have answers to basic questions like whether cost-benefit analyses tend to overstate costs or whether they tend to overstate benefits. For instance, in the case of health-related regulations, estimating benefits can involve a long chain of reasoning that links basic science to health effects to the monetization of those effects. Costs are also difficult to estimate because it is hard to gauge how firms will respond and how technology will evolve. Furthermore, it can be quite difficult to estimate how a regulatory policy will affect different segments of the population. As highlighted by the authors, such distributional concerns, while important, have not been a primary focus of cost-benefit analyses. Similar initiatives exist in the EU and in many countries in the Organisation for Economic Co-operation and Development (OECD), but as noticed by Hahn and Tetlock (2007), the U.S. is probably the world's leader in implementing some form of government-sponsored cost-benefit analysis to inform significant regulatory decisions.

Impact Assessment (IA) is the European counterpart of the U.S. RIA. IA is required for all major European Commission (EC) initiatives and contains an evaluation of the social, economic, and environmental impacts of various policy options associated with a proposal. The EC encourages estimates to be expressed in qualitative, quantitative, and, where appropriate, monetary terms (Commission of the European Communities 2004). Renda (2006) analyzes the first 70 IAs carried out by the EC from 2003 to July 2005 using a scorecard similar to that used by Hahn and Dudley (2007). Renda finds that the IAs seldom estimated costs, almost never quantified costs to businesses, did not specify benefits, and virtually never compared costs and benefits. In addition, alternatives were seldom compared and discount rates were almost never specified. Given the difficulty of

estimating a new regulation's costs and benefits by using neoclassical microeconomic methods, both the EC and the EU's business community have opted for a different methodology—business surveys—to estimate how new regulations will affect the competitiveness of European businesses.

The review of the U.S. regulatory analysis conducted in this section shows that the emphasis has been on making this process more efficient by depending heavily on the paradigms of neoclassical microeconomics to measure the costs and benefits of regulations. There is evidence that the government is still very inefficient in performing this task, and more importantly, that it has put little effort in measuring the distributional effects of federal regulations among different groups in the society. Starting with President Reagan's administration, there has been some emphasis on measuring the impact of regulations on small businesses, but for the most part, data are still lacking that would allow evaluating the impact of regulation on the competitiveness of U.S. industries separately from its effects on households and other groups. The difficulty of using cost-benefit analysis to estimate the distributional effects of regulation has led the European Union and many European countries to adopt a complementary methodology: business surveys. In the following section, some of the business surveys developed in the European Union and in Sweden in particular, which is perhaps the EU's most active country in the implementation of business-friendly regulations, are addressed.

## 4. Learning from the European Experience

The theme that the U.S. economy and its businesses are losing competitive advantage is one usually discussed by industrial organizations. In its *Global Competitiveness Report 2007-2008*, the World Economic Forum (2007) states that the United States still tops the overall ranking in competitiveness. However, the American Electronics Association's 2007 report *We Are Still Losing the Competitive Advantage* contends that although the United States still leads the world in science, technology, and innovation, it is at risk of squandering this preeminence as countries across the globe become more competitive. In

a lecture given at the Heritage Foundation, Bord (1992) questions how American corporations can be competitive in the emerging global economy while struggling under the most elaborate and oppressive regulatory regime of any developed market economy in the world. In her view, "government regulation operates as an 'invisible foot' planted firmly on the back of American business and impeding its global competitiveness."

Krugman (1994) argues that defining national competitiveness is problematic because, unlike corporations, countries do not go out of business. However, there is no doubt that industries compete across borders. In this regard, there is real concern that the expansion of the U.S. regulatory system may affect the competitiveness of U.S. industries. This concern is primarily focused on the effect of increasing environmental compliance costs. Every year, U.S. firms devote significant resources to developing ways to deal with environmental problems, introducing new methods of reducing or treating air or water emissions, recycling or reusing waste, finding cleaner energy sources, and seeking other methods of environmental protection (Brunnermeier and Cohen 2003).

Overall, there is little evidence to support the hypothesis that environmental regulations have had a large net adverse effect on competitiveness. Unfortunately, these conclusions are based on old data and on studies that have analyzed only the effects of regulations on costs or benefits, but not both. The lack of data is the bottleneck that prevents understanding the relationship between regulation and competitiveness. What can the U.S. business community do? It needs to take a proactive role following the lead of other countries. Canada adopted its Business Impact Test[8] (not discussed here) because regulators did not do a good job in this area. Similarly, member countries of the EU have been active in developing "business-friendly" regulations.

In the past few years, regulatory simplification has been an increasingly important economic issue in the EU. About 20 member countries as well as the EU's own institutions are working to reduce companies' administrative costs due to regulation. This

[8] This test was developed by Industry Canada, Treasury Board of Canada, and the Canadian Manufacturers and Exporters Association.

objective is part of a general understanding among decision makers that the regulatory burden on businesses needs to decrease and that business-friendly regulation is a priority in marketing the EU countries as the best place to do business. Among the EU countries, the business community in Sweden has undertaken one of the most important initiatives on studying the relationship between regulation and competitiveness. Figure 3 summarizes some of the most important initiatives in Sweden and the EU.

The Board of Swedish Industry and Commerce for Better Regulation (NNR) was founded in 1982 as an independent, non-partisan organization funded entirely by its members.[9] The membership consists of the 14 largest Swedish business organizations and trade associations comprising a combined membership of some 300,000 companies. The NNR represents a third of all active companies in Sweden. Its principal focus is regulatory simplification and a more business-friendly environment, not only in Sweden but also in the EU. One of its principal tasks is to coordinate the business sector's scrutiny of IAs and to negotiate with regulatory agencies during the evaluation of the costs and benefits of a new regulation.

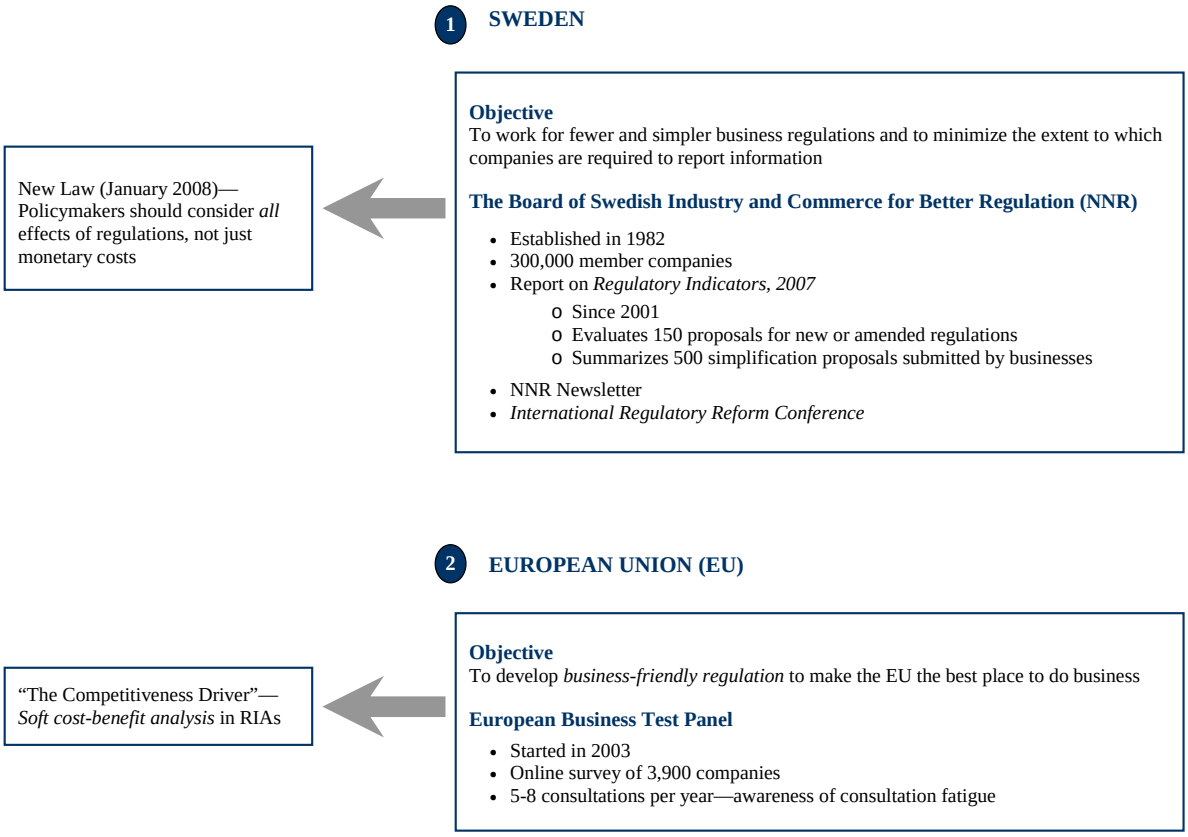
The NNR chairs the Better Regulation Working Group of the Confederation of European Business (BUSINESSEUROPE).[10] The Group includes representatives from all major business organizations in the EU member countries. It encourages a Europe-wide competitive industrial policy and acts as a spokesperson for European institutions. The recommendations of the Group are communicated to EU policy makers to make sure that business interests are taken into account as legislation is formulated.

Perhaps the NNR's biggest success is a government ordinance, approved on January 1, 2008, requiring Swedish regulatory agencies to carry out IAs when proposing new national regulations or amending existing ones. The ordinance states that policy makers should consult with businesses and take into consideration all effects on businesses, not just monetary costs. The NNR was also successful in conveying to the Swedish

[9] Most of the information presented here comes from the NNR website: http:www.nnr.se/inenglish.html.
[10] http://www.businesseurope.eu

government the need for a national Impact Assessment Board that will review the quality of all IAs. The idea of creating this board has been strongly supported in *The NNR Regulation Indicator* since the NNR started publishing it annually in 2002.

## Figure 3—Business regulation: main European initiatives




In November 2007, NNR published its sixth annual 'Regulation Indicator' report. The report analyzes the quality of new and amended regulations and the progress of the government's better regulation program. The 2007 evaluation covers 150 proposals for new or amended regulations put forward by government agencies and departments. The report shows that in over 60 percent of the cases, proposed new or amended regulations would lead to an increase in administrative costs for businesses. NNR proposes 12

measures that the government should implement to reduce businesses' administrative costs of complying with regulation by 25 percent by 2010.

In addition to the annual report, the NNR recently published a study titled *The Total Cost of Regulations to Businesses in Sweden* (2007). This study summarizes findings from a project to estimate the total cost to businesses of complying with selected new regulations. The costs were divided into three categories: administrative, financial, and material or policy costs. In-depth interviews were conducted with companies from different sectors and of different sizes to estimate their total annual compliance costs that stem from national and EU regulations.

Sweden is not the only country that has been very active in developing business-friendly regulations; the European Community as a whole has also moved in the same direction. In January 2008, the EC established a high-level group of independent stakeholders. The group has a three-year mandate to advise the EC through the implementation of its *Action Plan on Reducing Burdens Imposed by Legislation in the EU*. The group has 15 members from industry, small and medium enterprises (SMEs), and environmental and consumer groups. Although the main focus of the group has been on reducing administrative burdens by 25 percent, the *NNR Newsletter* (January 2008: 3) suggests that "they must look beyond administrative costs. Considerations should be given to the total costs to businesses of complying with regulation, including policy and enforcement costs."

One of the most important business initiatives developed by the EC is the European Business Test Panel (EBTP) that started in 2003.[11] This online survey asks 3,900 companies about the impact of major regulations. The EBTP is a representative sample of firms across sectors and countries that comprise the European economy. The EC anticipates that the EBTP could be incorporated into IAs in the future. By joining the EBTP, companies have an opportunity to remark on upcoming EU legislation. They are invited to comment on upcoming policy proposals between six and eight times per year

[11] http://ec.europa.eu/yourvoice/ebtp

through a short online questionnaire. The EC has a “10 questions in 10 minutes” policy and intends to provide helpful feedback on the results obtained.

## 5. Conclusions

By law, the U.S. Office of Management and Budget presents annual estimates of the costs and benefits of major regulations by agency, program, and rule. It must also estimate the impact of regulation on small businesses, but in this case, instead of conducting its own estimates, OMB reports data from three studies sponsored by the SBA’s Office of Advocacy. These studies estimate total regulatory costs including the cost for small businesses (Crain 2005; Crain and Hopkins 2001; Hopkins 1996). There is, however, a vast discrepancy between the estimates of the total cost of regulation by OMB- and SBA-sponsored studies, mainly related to differences in the set of federal regulations that they analyze (major regulations reviewed by the OMB versus all regulations by SBA-sponsored studies). Neither OMB- nor SBA-sponsored studies provide detailed estimates of the costs of regulations by industrial sector (e.g., by at least four-digit NAICS). Rather, they only provide estimates of the cost of regulations for all businesses in the United States.

As documented in this paper, businesses paid an estimated $648 billion to comply with U.S. federal government regulation costs in 2004. As also reported here, every indicator shows that the cost for businesses of complying with these regulations is sizable and has been growing rapidly. Has this cost affected the competitiveness of U.S. businesses? Most of the studies conclude that differences in *environmental compliance costs* rarely have a serious effect on industrial competitiveness. These empirical studies, however, do not account for the costs associated with other types of federal regulations. The scarcity of data on the cost of other kinds of federal regulations may explain the much larger number of studies that analyze the relationship between pollution abatement costs and competitiveness than those addressing the cost of complying with health and safety laws or economic regulations on competitiveness.

Other studies make a case for the positive aspects of regulation on industries (Porter Hypothesis). These studies hypothesize that properly designed environmental standards could prompt innovation that may partially or more than fully offset the cost of complying with them. Such innovation offsets could not only lower the net cost of meeting environmental regulations but could even lead to absolute advantages over firms in foreign countries that are not subject to similar regulations. By stimulating innovation, strict environmental regulation could actually enhance competitiveness. However, empirically testing the Porter Hypothesis is difficult because there are no data available, and the few relevant case studies show that environmental benefits were incidental to the economic advantages that motivated the introduction of new technologies.

The following question remains: Why is the U.S. government not collecting data that will allow a better understanding of the effects of regulation on the competitiveness of U.S. businesses? Since 1981, the U.S. government has required that regulatory agencies prepare a Regulatory Impact Analysis (RIA) in which federal agencies estimate the total costs and benefits for society of a new regulation. As reviewed here, the priority of the U.S. regulatory analysis program has been on improving how to measure the *efficiency* of a regulation—the costs and benefits of a new regulation for society. In contrast, the distributional effects of new regulations—how their costs and benefits are divided among different groups in society, including businesses, local and state governments, and consumers—have not been a priority.

Recent studies that have analyzed RIAs' success in estimating costs and benefits conclude that answers do not exist to basic questions such as whether cost-benefit analyses tend to overstate costs or overstate benefits. They note that it is also difficult to predict how firms will respond to new regulations or how technology may change their response. Moreover, attempting to estimate how a particular regulatory policy might differentially affect various sectors of society is not straightforward. And, although these distributional concerns are vital, they have not been at the center of cost-benefit analyses.

An impact assessment (IA) is the European counterpart of a U.S. RIA. Studies that evaluate IAs conclude that they seldom estimate costs, almost never quantify costs to businesses, do not specify benefits, and virtually never compare costs and benefits. In addition, alternatives are seldom compared, and discount rates are almost never specified. Given the lack of consistency and reliable estimates of the costs and benefits of a new regulation, the business community in Europe has opted for a proactive approach, conducting its own studies and collecting its own data on the effects of new regulations.

Important business initiatives in Europe include:

- the EU's European Business Test Panel, an online survey that asks companies about the impact of major regulations
- the UK's Department for Business, Enterprise and Regulatory Reform, which seeks to achieve a better EU regulatory environment (not discussed in this report)
- Sweden's Board of Industry and Commerce for Better Regulation (NNR), which publishes an annual report on the effect of new regulations on businesses (based on a survey of member companies) and negotiates with regulatory agencies during the evaluation of the costs and benefits of new regulations.

The lack of consensus in the results from empirical studies in the United States hinders the ability to conclude either that regulation is hurting U.S. firms or that there is a need for a Competitiveness Impact Statement that will force federal agencies to account for the effects of regulation on businesses. The justification for a CIS or a similar new approach would have to be based on an analysis of the effects on business of all regulatory costs (not just pollution abatement costs) and on a deeper understanding of the strategies that companies follow to offset stricter regulatory policies. However, U.S. businesses should not simply wait for the federal government to build the necessary databases and studies that will support such initiative. Rather, they should emulate the experience of European countries in conducting their own surveys and studies on the effect of major regulations on the competitiveness of businesses.

Which organization, then, could or should conduct these surveys and conduct relevant studies? Founded in 1986, the Council on Competitiveness is a group of corporate CEOs, university presidents, and labor leaders committed to enhancing U.S. competitiveness in the global economy.[12] A nonpartisan, nongovernmental organization in Washington, D.C., the Council shapes the debate on competitiveness. However, competitiveness is a broad concept that involves a diversity of issues. For instance, in 2008, the Council's focus has been on the need to improve the education system in the United States, to set a national agenda to equip Americans with the skills needed to compete globally, and to identify the barriers that large and small firms face in moving from desktop computers to high performance computing servers. Hence, it appears that examining the effect of federal regulation on competitiveness is not its immediate priority. Another organization, the AEI Reg-Markets Center (formerly the AEI-Brookings Joint Center for Regulatory Studies) at the Brookings Institute, funded in 2008, studies how markets, laws, and regulation contribute to economic well-being. It is maintained in this report that the U.S. needs an organization similar to Sweden's NNR, whose only purpose is to study the effect of federal (national) regulations on U.S. businesses.

Yet not all regulation is national in scope. Much regulation occurs at the state and local levels.[13] The organization that conducts the proposed surveys should also consider the effect of state regulations on U.S. businesses. Under the Reagan and G.H.W. Bush administrations, there was an emphasis on transferring some of the control over regulatory structure and regulatory enforcement to the states. Lipton and Gardiner (2007) wrote in the *New York Times* that some big industries are actually seeking more federal regulation in order to compete with cheap imports and as a tactic to forestall tougher state regulations that were a response to the G.W. Bush administration's hands-off policies. This change in tactic is motivated in part by growing competition from inexpensive imports, mainly from China. The article quotes the director of regulatory policy at OMB

[12] Most of the information about the Council comes from its website: http://www.compete.org.

[13] It is noteworthy that from a historical standpoint, most regulation, such as the rate regulations for railroads, began at the state level. These regulations were subsequently extended to the national level.

Watch, a Washington group that tracks federal regulatory actions, who said, "I have never before seen so many industries joining a push for regulation" (p. 1).

In addition to our review of the literature, we conducted interviews with three experts on U.S. regulatory policy (see the Appendix for details) to test their support for a Competitiveness Impact Statement (CIS). They confirmed many of the findings discussed here in our literature review, but also stressed the need to study whether a CIS will intensify the paperwork burden of federal agencies. Thus, the organization that conducts the survey should also take into consideration the cost for federal agencies of complying with this new law.

In 2004, the costs of federal regulation reached $1.1 trillion for all groups in society (including businesses, consumers, and state governments). More important for the purpose of this report, the total cost of regulation for U.S. businesses was $648 billion, and the cost per employee was $5,633, a 4.1 percent increase since 2000 (after adjusting for inflation).[14] The burden of total regulatory costs was even larger for the manufacturing sector, which in 2004 bore a cost per firm of $548,077 and a cost per employee of $10,175. The link between regulatory costs and competitiveness deserves serious attention, especially through the building of new data sources and surveying U.S. businesses on the effect of major regulations. A multi-country industry database of the costs of regulation would permit disentangling the effects of firms' strategies (control variables) from the direct effects of increasing regulation costs on their competitiveness. In short, until we do not have good data on the impact of regulation on U.S. industries, we will not be able to understand whether it is time for a Competitiveness Impact Statement.

[14] Who ended up bearing the cost of regulation? Depending on the elasticity of demand, producers may be able to transfer some of these regulatory costs to the consumer through higher prices. The available data on the burden of regulation on the private sector do not account for these effects. As Viscusi et al. (2005: 41) note, "In practice, however, the shifting of this and other costs among consumers, shareholders, workers, and other parties is a very complex matter."

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# Appendix

As indicated at the beginning of this report, the motivation for the literature review on the relationship between federal regulation and competitiveness is to explore the need for a Competitiveness Impact Statement (CIS). In addition to our extensive review of the literature, we conducted interviews with three experts on the U.S. regulatory system (see their biosketches below) to explore the net benefits of a CIS. We asked them two questions: Is the idea of a CIS a good one? Can any other impact statement, and in particular, the Environmental Impact Statement,[15] be used as a model for a CIS? There was considerable consensus in their answers.

McGarity argues that a new CIS would intensify the "ossification" (a term that he introduces to the literature in the 1970s) of federal agencies; that is, it would impose more paperwork on them. He points out that "a CIS will be something that will get in [the agencies'] way and will slow them down." He also notes that surprisingly little progress has been made in assessing regulatory costs. Cross has a similar view. He points out that a CIS will not only slow down federal agencies (keeping them from performing their main task of protecting the public), but will also contribute to the increase of the already high costs of preparing impact statements. Spence argues that too many rules could get in the way of each other, making the entire regulation process very inefficient.

In assessing the validity of using the EIS as a model for a CIS, McGarity points out that the EIS has two objectives: (1) to have an impact on substantive decisions by federal agencies and (2) to inform the public. In his view, the EIS has failed in its first objective but has excelled in the second one since it has been a very successful tool to inform the public on the possible environmental consequences of a large project. Since the main objective of a CIS would be to have an impact on substantive decisions by federal agencies, it is difficult to argue that the EIS would be a good model for a CIS. While Cross disagrees with the idea of a CIS, he approves of the existence of an EIS because the latter does not apply to regulations (as a CIS would) but to large government projects such as dams. Spence notes that for the federal agencies, the EIS is "just a bother … something that has to be done. They typically hire a consultant … so there is a cost, but it is rarely a deal-breaking cost. In contrast, pollution abatement costs can be very [significant]." The EIS's "lack of significance" makes it very difficult to argue that it might be a good model for a CIS.

## *Biosketches of Interviewees*

Thomas O. McGarity is the Joe R. and Teresa Lozano Long Endowed Chair in Administrative Law at the School of Law, The University of Texas at Austin. A former

[15] According to the National Environmental Policy Act (NEPA), whenever the federal government takes a "major federal action significantly affecting the quality of the human environment," it must first consider the environmental impact in a document called an Environmental Impact Statement (EIS) (42 U.S.C. § 4332).

Articles Editor of the *Texas Law Review*, Professor McGarity is a leading scholar in the fields of both administrative law and environmental law. He has written three influential books: *Workers at Risk* (Praeger, 1993) (co-author), *The Law of Environmental Protection* (West, 2nd ed., 1991) (co-author), and *Reinventing Rationality: The Role of Regulatory Analysis in the Federal Bureaucracy* (Cambridge, 1991). His recent articles include "On the prospect of Daubertizing judicial review of risk assessment" (*Law & Contemporary Problems*, 2003). He currently serves as President of the Center for Progressive Reform at UT's School of Law.

**David B. Spence** is Professor of Law, Politics, and Regulation at the McCombs School of Business, The University of Texas at Austin, where he teaches courses on energy regulation, environmental regulation, and business-government relations. Before coming to academia, he was a practicing attorney representing public utilities, municipalities, merchant energy companies, and others in connection with a wide variety of environmental and energy regulatory matters. Professor Spence is co-author of the Foundation Press textbook *Energy, Economics and the Environment* (2006) as well as numerous scholarly articles on energy and environmental regulation and the regulatory process. He holds advanced degrees from Duke University (Ph.D.) and the University of North Carolina (J.D.) and has taught at Vanderbilt University Law School, the Cornell University School of Law, the Bren School of Environmental Management at the University of California at Santa Barbara, the Nicholas School of the Environment at Duke University, Edinburgh University (Scotland), and IMADEC University (Vienna, Austria).

**Frank B. Cross** is the Herbert D. Kelleher Centennial Professor of Business Law in the McCombs School of Business and a Professor in the School of Law, both at The University of Texas at Austin. He received his B.A. from the University of Kansas and his J.D. from Harvard Law School. He has served as President of the Academy of Legal Studies in Business. Professor Cross's primary research areas are descriptive and normative studies of judicial decision making, the economics of law and litigation, and traditional policy and doctrinal issues in administrative law. He has published in journals including the *Yale Law Journal*, *Columbia Law Review*, *University of Chicago Law Review*, *New York University Law Review*, *Texas Law Review*, *Virginia Law Review*, *Cornell Law Review*, *Georgetown Law Journal*, and *UCLA Law Review*.